

# Manual for Preparation of Drinking Water Consumer Confidence Reports

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## Table of Contents

Introduction .....	1
I. What is a consumer confidence report? Why are drinking water systems required to prepare them? .....	1
II. Who must prepare a consumer confidence report? .....	1
III. When must a water system distribute its consumer confidence report?.....	2
IV. What must a water system include in its consumer confidence report?.....	2
Item 1: Basic information about the water system.	3
Item 2: Source(s) of water.	3
Item 3: Definitions.	3
Item 4: Levels of detected contaminants.	4
Item 5: Required educational language.	7
Item 6: Information on violations of national primary drinking water regulations (NPDWR).	7
Item 7: Additional information if system is operating under a variance or exemption.	8
V. Requirements for delivery of the consumer confidence report .....	9
Appendix A -Converting MCL Compliance Values for Consumer Confidence Reports .....	12
Appendix B--Regulated Contaminants .....	15
Appendix C--Health Effects Language .....	18

## Introduction

The U.S. Environmental Protection Agency (EPA) prepared this document to help operators of community water systems prepare the new drinking water Consumer Confidence Reports (CCR) [40 CFR part 141 Subpart O]. This guide explains which information must be in the reports, how to present the information, and how to distribute the report.

CCRs are a great opportunity for water system operators. The reports will not only help consumers to make informed choices that affect the health of themselves and their families, they will encourage consumers to consider the challenges of delivering safe drinking water. Educated consumers will be more likely to help you protect drinking water sources and will be more understanding of the need to upgrade the treatment facilities that make their drinking water safe.

Many systems already distribute CCRs voluntarily. Those systems know that it is useful to create a positive relationship with their customers. A little goodwill goes a long way.

### **I. What is a consumer confidence report? Why are drinking water systems required to prepare them?**

In 1996, the U.S. Congress amended the Safe Drinking Water Act (SDWA). One of the provisions that Congress added to the law was a requirement that all community water systems provide to their customers a brief annual water quality report. Congress specified certain content for the reports, and required water systems to distribute these reports to all of their customers. CCRs summarize information that water systems already collect to comply with regulations. You will not need to engage in any new monitoring just for the CCR.

The report will contain basic information on the source(s) of your water, the levels of any contaminants in the water, and compliance with other drinking water rules, as well as some brief educational material. EPA expects that most reports will fit on one piece of paper. A report that contains *too much* information, or is full of technical jargon, will discourage consumers from learning the basics about their drinking water.

The guiding principle behind consumer confidence reports is that all people have the right to know what is in their drinking water and where it comes from. CCRs are not the only part of the revised SDWA that encourage water systems to educate and involve the public. SDWA requires EPA to revise its public notification requirements to speed up notification of violations that present serious health risks, and simplify notification of other violations. SDWA also requires systems and states to involve citizens in deliberations regarding use of the drinking water state revolving fund and in planning for source water assessments. Consumers who are familiar with the basic drinking water information in CCRs will be able to participate more effectively in these processes.

### **II. Who must prepare a consumer confidence report?**

Every community water system that serves at least 25 residents year round or that has at least fifteen service connections must prepare and distribute a consumer confidence report. A community water system that sells water to another community water system must provide the buyer with information that will enable the buyer to produce a CCR. The seller must provide this

information to the buyer unless the buyer and seller make a contractual agreement setting another date.

Other resources available to help operators produce their reports:

- X The EPA is offering a computerized Afill-in-the-blank@ template that your system may use to create a simple but effective CCR.
- X The Safe Drinking Water Hotline (800-426-4791) is a resource for health- related questions and water quality issues.
- \$ State drinking water agencies are providing monitoring data and helping systems to create useful CCRs.
- \$ The American Water Works Association (AWWA), Association of Metropolitan Waterworks Associations (AMWA), and the National Rural Water Association (NRWA) are encouraging their members to make the CCR part of an overall communications strategy, and are providing resources to help systems achieve that goal.

### **III. When must a water system distribute its consumer confidence report?**

The reports are based on calendar year data. The first report will include data from 1998, and must be delivered to consumers by October 19, 1999. Reports in years after that are due by July 1. Wholesalers must deliver information to their buyers by April 1999, and annually thereafter.

### **IV. What must a water system include in its consumer confidence report?**

EPA=s regulations set a baseline for the reports. The Agency encourages all systems to enhance or adjust the content of their reports to suit local conditions. If you think that an added picture or graph would help your customers to understand the information that you=re providing, by all means, add it. If your customers would benefit from an explanation for why you do additional monitoring or have added new treatment facilities, tell them. As long as any additional information is consistent with, and not detracting from, the purpose of the report, you may add it.

As you know, customers are most interested in a clear statement of whether or not their drinking water meets all the relevant standards. Although it is not mandated by the CCR regulations, the most useful thing you can do for your customers is to include a few sentences at the beginning of the report explaining the steps you take to protect their drinking water and telling them whether they should feel confident drinking the water that you provide.

One example of this comes from a report that Denver Water sent to its customers in 1998:

*A Water Quality Exceeds Mark--Denver Water vigilantly safeguards its mountain water supplies and once again we are able to report that the department has never had a violation of a contaminant level or of any other water quality standard. This brochure is a summary of the quality of water provided to customers last year. It is a record reflecting the hard work by our 1,000 employees to bring you water that is absolutely safe. Included are details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. Denver Water is committed to providing you with*

*information about your water supply, because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.@*

EPA requires the following information, explained accurately and understandably, in every consumer confidence report:

### Item 1: Basic information about the water system.

Identify the name of your system, and include the following information about it:

- X The name and telephone number of a person at the water system who can provide additional information and answer questions about the report.
- X A listing of known opportunities for public participation in decision making processes that affect drinking water quality (for example, time and place of regularly-scheduled board meetings). If you do not have regularly-scheduled meetings, you may want to tell customers how they can get information when meetings are announced.

Systems that have a large proportion of *non-English speaking customers* must include information in the appropriate language expressing the importance of the report or offering additional information in the specific language.

*ExamplesBSpanish--Este informe contiene información muy importante. Tradúscalo ó hable con alguien que lo entienda bien. (AThis report contains very important information. Translate it, or speak with someone who understands it.)@*

*BVietnamese--*

*BChineseB*

*BFrenchB*

### Item 2: Source(s) of water.

You must report the type of water (ground water, surface water, or a blend), and the commonly-used name(s) (if such a name exists) and locations of water source(s). It would be helpful to your customers to provide a simple map of your system and its sources.

If a source water assessment has been completed, notify consumers of the availability of the assessment and tell them where to find a copy. If you have received your source water assessment, you need to include in the report a brief summary of your source water=s susceptibility to contamination based on the findings of the source water assessment. The state should provide this to you. This is your opportunity to educate your customers about the impacts that they have on the quality of their water.

### Item 3: Definitions.

The CCR must include definitions of key regulatory terms that consumers will need to understand the contaminant data. The definitions in the reports must be those listed below.

- X **Maximum Contaminant Level or MCL:** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

- X **Maximum Contaminant Level Goal or MCLG:** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

The following definitions need to be included only if your report contains information on a contaminant that is regulated by an Action Level or Treatment Technique.

- X **Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.
- X **Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

The following definition for variances and exemptions must be included only if your water system operates under a variance or exemption.

- X **Variances and Exemptions:** State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

#### Item 4: Levels of detected contaminants.

An important part of the report is the table that shows the highest level of each detected contaminant (the highest number you reported to the state to determine compliance) and the range of levels of that contaminant you found during the year, if you took more than one sample. The table will also provide for each detected contaminant: the associated Maximum Contaminant Level (MCL) and Maximum Contaminant Level Goal (MCLG), and the likely or known source of that contaminant in drinking water.

A detected contaminant is any contaminant detected at or above its minimum detection limit. (See Appendix D)

To ensure that consumers can properly compare detected contaminant levels with their MCLs, the table must display the MCL in units that express it as a number greater than 1.0. The MCLG and level of the detected contaminant must be reported in those same units. For example, atrazine is traditionally reported in mg/l. The MCL for atrazine is 0.003 mg/l. If your system detected atrazine at 0.0003 mg/l, it would be more difficult for consumers to understand at a glance that your water is 10 times below the MCL than if you were to report the MCL as 3 ppb and the detected level as 0.3 ppb. Appendix A shows how to convert MCLs and monitoring data for the CCR.

The main table must contain only data for regulated contaminants (contaminants subject to a MCL, TT, or AL), and unregulated contaminants for which monitoring is required by EPA or the state under 40 CFR 141.40 or the Information Collection Rule (ICR). *Cryptosporidium* and radon are included elsewhere in the report. Only the results of ICR finished water monitoring should be included in the table. Additional monitoring data should be reported in another section of the CCR, clearly separated from the regulated contaminant data.

You should generally report data from monitoring completed during the past calendar year. When you have monitoring waivers, or for another reason monitor less than once per year, include in the table contaminant data collected in the most recent testing period. Therefore, if you monitor once every three years for a contaminant and detected that contaminant in the last sample, report the same detection level each of the three years until you take a new sample. If

the report contains detection data that is not from the calendar year indicated, the table must show the date of monitoring and the report must also contain a brief statement explaining that the data presented is from the most recent monitoring done in compliance with regulations.

*EXAMPLE*The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data [for inorganic contaminants or whatever], though accurate, is more than one year old.

The results of monitoring done under the Information Collection Rule must be reported only for five years from the date of the last sample or until the detected contaminant becomes regulated and subject to regular monitoring requirements.

The table must contain, for each detected contaminant:

- G the MCL for that contaminant expressed as a number greater than 1.0 (see Appendix A). If the contaminant is regulated by a TT, put the letters ATT@ in place of the MCL. If the contaminant is regulated by an AL, specify the AL applicable to that contaminant.
- G the MCLG for that contaminant expressed in whole numbers (see Appendix A).
- G the level of that contaminant expressed in the same units as the MCL and MCLG:
  - < if compliance is determined annually or less frequently (for example, many inorganic and chemical contaminants), include the highest detected level at any sampling point and the range of detected levels, if applicable.
  - < if compliance is determined by a running annual average of all the samples taken from a sampling point (for example, chemical contaminants), include the highest average of any of the sampling points (as reported to the state for compliance purposes) and the range of detections at all sampling points.
  - < if compliance is determined by a running annual average of all samples at all sampling points (for example, TTHMs), include the average of all samples and the range of detected levels.
  - < for turbidity (when reported pursuant to 40 CFR 141.13Bturbidity as a MCL for systems that must install filtration but haven=t), include the highest average monthly value.
  - < for turbidity (when reported pursuant to 40 CFR 141.71Bturbidity as a TT for systems that have met criteria for avoiding filtration), include the highest monthly value. Explain the reasons for measuring turbidity.
 

*EXAMPLE*Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality and the effectiveness of disinfectants.
  - < for turbidity (when reported pursuant to 40 CFR 141.73Bturbidity as a TT for systems that filter and use turbidity as an indicator of filtration performance), include the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in 141.73 for the relevant filtration technology. Explain the reasons for measuring turbidity.
 

*EXAMPLE*Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
  - < for lead and copper, include the 90<sup>th</sup> percentile value from the most recent sampling and the number of sampling sites exceeding this value.
  - < for total coliforms (systems that collect fewer than 40 samples per month), include the highest number of positive samples collected in one month.
  - < for total coliforms (systems that collect 40 or more samples per month), include the highest percentage of positive samples collected in one month.
  - < for fecal coliforms, include the number of positive samples.
- G the likely source of that contaminant, according to the best information that you have. The report need not identify a specific point source, such as AA1=s chicken houses@ or

the ASuper-shiny Paper Mill@, but may say Afarms@ or Apaper mills@. If you are uncertain of the source of a contaminant, include one or more of the typical sources listed in Appendix A which is most applicable to the local situation.

- G for any contaminant detected in violation of a MCL or a TT, or exceeding an AL, clearly highlight in the table the violation or exceedence. This indication could, for example, take the form of a different color type, a larger or heavier font, or a large star. Near by, but not in, the table, include an explanation of the length of the violation/exceedence, the potential adverse health effects (from Appendix C), and actions you took to address the violation/exceedence.
- G If your system distributes water through two physically distinct distribution systems from different raw water sources, include in the table separate columns for detection data for each service area. Also, describe the area served by each distribution system.
- G If you=ve detected unregulated contaminants for which monitoring is required (except *Cryptosporidium*), include the average of all of the year=s monitoring results and the range of detections.

#### Reporting on contaminants outside of the table:

- G if the system has performed monitoring that indicates the presence of *Cryptosporidium* either in its source water or its finished water, include in the report:
  - S a summary of the results of the monitoring. You may choose whether or not to report the actual analytical results as a part of this summary.
  - B an explanation of the significance of the results. Tell customers if they need to be concerned by the information that the CCR provides.

*EXAMPLEB*Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring of source water and/or finished water indicates the presence of these organisms. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested for it to cause disease, and it may be spread through other means than drinking water.

- G if the system has performed monitoring that indicates the presence of radon in its finished water, include in the report:
  - B the results of monitoring (the analytical values reported by the lab)
  - B an explanation of the significance of the results. Tell customers if they need to be concerned by the information that the CCR provides.

*EXAMPLEB*Radon is a radioactive gas that occurs naturally in some ground water. It poses a health risk when the gas is released from water into air, as occurs during showering, bathing, or washing dishes and clothes. Radon in drinking water is a relatively small part of the total radon in air. Other sources of radon gas are soil and cigarettes. Radon gas that is inhaled has been linked to lung cancer, however, it is not clear what level of radon in your drinking water contributes to this health effect. If you are concerned about radon in your home, tests are available to determine the total exposure level. For additional information on how to have your home tested, contact [insert name of health department or other source of local test kits].



G if the system has performed other monitoring voluntarily and this monitoring indicates the presence of unregulated contaminants in the finished water, you should report any results that may indicate a health concern. We consider any detection above a proposed MCL or health advisory level to indicate concern. You can call the Safe Drinking Water Hotline for this information. For these contaminants, EPA recommends that the report contain:

S the results of monitoring; and

S an explanation of the significance of the results, noting the existence of the health advisory or proposed MCL.

### Item 5: Required educational language.

Every CCR must prominently display the following statements:

- (1) *Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).*
- (2) *Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline(1-800-426-4791).*

If your water system detected:

- < Nitrate above 5 mg/l (50 % of the MCL), but below the MCL;
  - < Arsenic above 25 Φg/l (50 % of the MCL, but below the MCL; and/or
  - < Lead above the Action Level in more than 5%, but fewer than 10%, of the homes sampled,
- you must include in your report a special educational statement about that contaminant. You may use the language below or write your own, which your primacy agency must approve.

Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Arsenic: EPA is reviewing the drinking water standard for arsenic because of special concerns that it may not be stringent enough. Arsenic is a naturally-occurring mineral known to cause cancer in humans at high concentrations.

Lead: Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home=s plumbing. If you are concerned about elevated lead levels in your home=s water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

### Item 6: Information on compliance with national primary drinking water regulations (NPDWR).

If, during the reporting period, the community water system was in violation of one of the following national primary drinking water regulatory requirements, your CCR must describe the violation(s). The description must include a clear and readily understandable explanation of the violation, potential adverse health effects (if any), and the steps the system has taken to correct the violation.

- X Monitoring and reporting of compliance data;
- X Treatment techniques;
  - (1) Filtration and disinfection (Surface Water Treatment Rule requirements);  
If the violation was a failure to install adequate filtration or disinfection equipment or processes, or there was a failure of that equipment or process, include the following language:  
Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
  - (2) Lead and copper control requirements;  
If the violation was a failure to meet corrosion control, source water treatment or lead service line requirements, you must include the health effects language for lead or copper listed in Appendix C.
  - (3) Treatment techniques for Acrylamide and Epichlorohydrin;  
If you violate either treatment technique, you must include the relevant health effects language from Appendix C.
- X Record keeping requirements;
- X Special monitoring requirements; or
- X Violation of the terms of a variance, an exemption, or an administrative or judicial order.

#### Item 7: Information if system is operating under a variance or exemption.

If the system is operating under a variance or exemption, its CCR must include a section that explains that the system is operating under a variance or exemption, the date that it was issued, why it was granted, when it is up for renewal, and a status report on what the system is doing to remedy the problem. Also, if public input to the review of the variance or exemption is available, include a notice stating such circumstances.

#### Item 8: Other educational information.

You are not limited to providing only the required information in your report. You may use the report to explain (or include a diagram of) your treatment processes or source water protection efforts. You may include a statement from the mayor or general manager. Or water conservation, taste and odor issues, affiliations with programs such as the Partnership for Safe Water... The only limitation on this information is that it must not interfere with the educational nature of the report.

- 5. Report format  
[to be written]

## VI. Requirements for delivery of the consumer confidence report

Your system must deliver a copy of its consumer confidence report to each of your customers. Deliver the first report by October 19, 1999, and reports in years after that by July 1. In addition, send a copy to the director of the state drinking water program. Within three months of this date, submit to the primacy agency a certification that the report has been distributed to customers, and that the information is correct and consistent with the compliance monitoring data previously submitted to the State. A copy also must be sent to any other agency in the state identified by the drinking water program director.

It is in your system=s interest to spread the word about the quality of its water as widely as possible. Since many consumers of your water may not receive bills (people such as apartment renters), you must make a serious and Agood faith@ efforts to reach non-bill paying consumers. A Agood faith@ effort means selecting the most appropriate method(s) to reach those consumers from a menu of options recommended by the primacy agency. Those options include but are not limited to:

- \$ posting the report on the Internet;
- \$ mailing the report to all postal patrons;
- \$ advertising the availability of the report in newspapers, TV, and radio;
- \$ publishing the report in a local newspaper;
- \$ posting the report in public places such as cafeterias or lunch rooms of public buildings, libraries, churches, and schools;
- \$ delivering multiple copies of the CCR for distribution by single-biller customers such as apartment buildings or large private employers; and
- \$ delivering the CCR to community organizations

Make your reports available to customers upon request.

The Governor of the State can waive the mailing requirement for water systems serving fewer than 10,000 people. If your mailing requirement is waived, take the following steps:

- X Publish the report in one or more local newspapers serving the system=s service area;
- X Inform customers that they will not receive consumer confidence reports, either by notification in newspapers or by other means approved by the State; and
- X Make the reports available upon customer request.

If your system serves 500 or fewer people and the Governor waives the mailing requirement for small systems, you do not have to publish the report in the newspaper, but must notify customers through a mailed, delivered, or posted notice that the report is available from your water system. At least once a year, give notice by mail, door to door delivery, public posting, or any other accepted method, that a consumer confidence report is available upon request.

Internet...

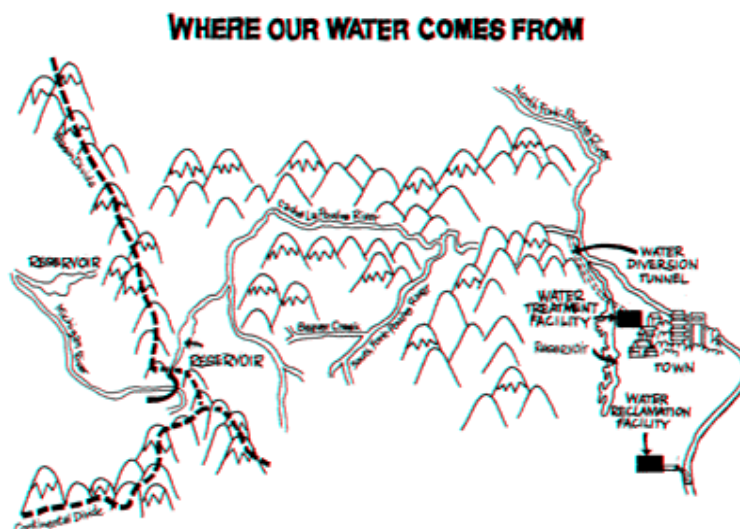
# Town water quality report-1999

## Is my drinking water safe?

*[OPTIONAL section]* Yes, our water meets all of EPA=s health standards. In 1998, we conducted over 2,000 tests for over 80 contaminants that may be in drinking water. As you=ll see in the chart on the back, we only detected 22 of these contaminants, and found all those contaminants at safe levels.

## What is the source of my water?

*[REQUIRED section: water system will write this]* Your water comes from Spitfire and Grubstake rivers in the mountains west of town. We collect water in the reservoir (see map) and then pipe it to the treatment plant just northwest of town. We=re working hard to protect our water from contaminants. We are working with the State to determine the vulnerability of our water supply to contamination. You may get a copy of this assessment by contacting us.



## How can I get involved?

*[REQUIRED section: water system will write this]*

Our Water Board meets on the first Tuesday of each month at 7:30 pm in the Town Hall. Please feel free to participate in these meetings.

## Is our water system meeting other rules that govern our operations?

*[REQUIRED section: water system will write this]* The State and EPA require us to test and report on our water on a regular basis to ensure its safety. We have always met all of these requirements. We want you to know that we pay attention to all the rules.

## Other Information

*[OPTIONAL section: water system will write this language]* Our water system is currently working with the community to increase

awareness of proper waste disposal, to further protect the source of our drinking water. We are also working with other agencies and local watershed groups to educate the community on ways to keep the water safe.

## Why are there contaminants in my water?

*[REQUIRED section: Mandatory language]* Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency=s Safe Drinking Water Hotline (800-426-4791).

**For more information about your drinking water, please call us at 867-5309.**

**Este informe contiene información muy importante. Tradúscalo o hable con alguien que lo entienda bien.**

## DO I NEED TO TAKE SPECIAL

## PRECAUTIONS? *[REQUIRED: Mandatory Language]*

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

# Water Quality Data

## What does this chart mean? [THIS TABLE IS REQUIRED ON ALL REPORTS]

! **MCLG**: Maximum Contaminant Level Goal, or the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

! **MCL**: Maximum Contaminant Level, or the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

! Discretionary language regarding the use of averages to report levels of some contaminants.

Contaminant (units)	MCLG	MCL	Level found	Range of detections	Violation	Date of sample	Typical source of Contaminant
<b>Microbial Contaminants</b>							
Total Coliform (%positive samples)	5	5	1.5	nd-2.0%			human and animal fecal waste
<b>Inorganic Contaminants</b>							
Antimony (ppb)	6	6	1.2				discharge from petroleum refining; fire retardants; ceramics; electronics; solder
Asbestos (MFL)	7	7	0.064				decay of asbestos cement pipes in water systems
Barium (ppm)	2	2	0.46				discharge of drilling wastes and metal refineries
Chromium (ppb)	100	100	2				discharge from steel and pulp mills; erosion of natural deposits
Copper (ppm)	1.3	AL=1.3	0.205				corrosion of household plumbing systems; erosion of natural deposits
Cyanide (ppb)	200	200	10			Feb >97	discharge from steel/metal industry; discharge from fertilizer & plastic factories
Fluoride (ppm)	4	4	0.98	nd-1.1			water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer & aluminum factories
Mercury (ppb)	2	2	0.2				discharge from refineries and factories; runoff from landfills and cropland
Nitrate as nitrogen (ppm)	10	10	1.9				runoff from fertilizer use; leaching from septic tanks, sewage
Nitrite as nitrogen (ppm)	1	1	0.036				runoff from fertilizer use; leaching from septic tanks, sewage
Selenium (ppb)	50	50	1			Feb >97	discharge from petroleum and metal refineries
Thallium (ppb)	2	2	0.8				discharge from electronics, glass, and drug factories
Turbidity (NTU)	n/a	TT	0.16	0.01-0.20			soil runoff
<b>Organic Contaminants</b>							
2,4-D (ppb)	70	70	1	nd-75			runoff from herbicide use on row crops
Dichloromethane (ppb)	0	5	0.7	nd-0.9			discharge from pharmaceuticals and chemicals factories
o-Dichlorobenzene (ppb)	600	600	213	80-340			discharge from industrial chemical factories
Tetrachloroethylene (ppb)	0	5	0.5	nd-0.7			leaching from PVC pipe; discharge from factories & dry cleaners
Total Trihalomethanes (TTHMs) (ppb)	0	100	61	33-78			by-product of drinking water chlorination
<b>Unregulated contaminants</b>							
Nickel	n/a	n/a	2				n/a
Dibromomethane (ppb)	n/a	n/a	0.9				n/a

**Turbidity:** Turbidity does not present any risk to your health. We monitor turbidity, which is a measure of the cloudiness of water, because it is a good indicator that our filtration system is functioning properly.

**Abbreviations:** \$ PPB: parts per billion or micrograms per liter \$ ppm: parts per million or milligrams per liter \$ n/a: not applicable \$ NTU: Nephelometric Turbidity Unit, used to measure cloudiness in drinking water \$ MFL: million fibers per liter, used to measure asbestos concentration. \$ AL: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. \$ TT: Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.

**About the data:** Most of the data presented in this table is from testing done between 1 Jan-31 Dec 1998. We monitor for some contaminants less than once per year, and for those contaminants, the date of the last sample is shown in the table.

### Appendix A -Converting MCL Compliance Values for Consumer Confidence Reports

#### Key

**AL**=Action Level

**MCL**=Maximum Contaminant Level

**MCLG**=Maximum Contaminant Level Goal

**MFL**=million fibers per liter

**mrem/year**=millirems per year (a measure of radiation absorbed by the body)

**NTU**=Nephelometric Turbidity Units

**pCi/l**=picocuries per liter (a measure of radioactivity)

**ppm**=parts per million, or milligrams per liter (mg/l)

**ppb**=parts per billion, or micrograms per liter (µg/l)

**ppt**=parts per trillion, or nanograms per liter

**ppq**=parts per quadrillion, or picograms per liter

**TT**=Treatment Technique

	Contaminant	MCL in compliance units (mg/L)	multiply by...	MCL in CCR units	MCLG in CCR units
<b>Microbiological Contaminants</b>					
6.	Total Coliform Bacteria	-	-	presence of coliform bacteria in ≥5% of monthly samples	0
7.	Fecal coliform and <i>E. coli</i>	-	-	a routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive	0
8.	Turbidity	-	-	TT (NTU)	n/a
<b>Radioactive Contaminants</b>					
9.	Beta/photon emitters	4 mrem/yr	-	4 mrem/yr	0
10.	Alpha emitters	15 pCi/l	-	15 pCi/l	0
11.	Combined radium	5 pCi/l	-	5 pCi/l	0
<b>Inorganic Contaminants</b>					
12.	Antimony	.006	1000	6 ppb	6
13.	Arsenic	.05	1000	50 ppb	n/a
14.	Asbestos	7 MFL	-	7 MFL	7
15.	Barium	2	-	2 ppm	2
16.	Beryllium	.004	1000	4 ppb	4
17.	Cadmium	.005	1000	5 ppb	5
18.	Chromium	.1	1000	100 ppb	100
19.	Copper	AL=1.3	-	AL=1.3 ppm	1.3
20.	Cyanide	.2	1000	200 ppb	200
21.	Fluoride	4	-	4 ppm	4
22.	Lead	AL=.015	1000	AL=15 ppb	0
23.	Mercury (inorganic)	.002	1000	2 ppb	2
24.	Nitrate (as Nitrogen)	10	-	10 ppm	10
25.	Nitrite (as Nitrogen)	1	-	1 ppm	1
26.	Selenium	.05	1000	50 ppb	50
27.	Thallium	.002	1000	2 ppb	0.5
<b>Synthetic Organic Contaminants including Pesticides and Herbicides</b>					

DRAFT	DRAFT	DRAFT	DRAFT	DRAFT
28.	2,4-D	.07	1000	70 ppb 70
29.	2,4,5-TP [Silvex]	.05	1000	50 ppb 50
30.	Acrylamide	-	-	TT 0
31.	Alachlor	.002	1000	2 ppb 0
32.	Atrazine	.003	1000	3 ppb 3
33.	Benzo(a)pyrene [PAH]	.0002	1,000,000	200 ppt 0
34.	Carbofuran	.04	1000	40 ppb 40
35.	Chlordane	.002	1000	2 ppb 0
36.	Dalapon	.2	1000	200 ppb 200
37.	Di(2-ethylhexyl)adipate	.4	1000	400 ppb 400
38.	Di(2-ethylhexyl) phthalate	.006	1000	6 ppb 0
39.	Dibromochloropropane	.0002	1,000,000	200 ppt 0
40.	Dinoseb	.007	1000	7 ppb 7
41.	Diquat	.02	1000	20 ppb 20
42.	Dioxin [2,3,7,8-TCDD]	.00000003	1,000,000,000	30 ppq 0
43.	Endothall	.1	1000	100 ppb 100
44.	Endrin	.002	1000	2 ppb 2
45.	Epichlorohydrin	-	-	TT 0
46.	Ethylene dibromide	.00005	1,000,000	50 ppt 0
47.	Glyphosate	.7	1000	700 ppb 700
48.	Heptachlor	.0004	1,000,000	400 ppt 0
49.	Heptachlor epoxide	.0002	1,000,000	200 ppt 0
50.	Hexachlorobenzene	.001	1000	1 ppb 0
51.	Hexachlorocyclopentadiene	.05	1000	50 ppb 50
52.	Lindane	.0002	1,000,000	200 ppt 200
53.	Methoxychlor	.04	1000	40 ppb 40
54.	Oxamyl [Vydate]	.2	1000	200 ppb 200
55.	PCBs [Polychlorinated biphenyls]	.0005	1,000,000	500 ppt 0
56.	Pentachlorophenol	.001	1000	1 ppb 0
57.	Picloram	.5	1000	500 ppb 500
58.	Simazine	.004	1000	4 ppb 4
59.	Toxaphene	.003	1000	3 ppb 0
<b>Volatile Organic Contaminants</b>				
60.	Benzene	.005	1000	5 ppb 0
61.	Carbon tetrachloride	.005	1000	5 ppb 0
62.	Chlorobenzene	.1	1000	100 ppb 100
63.	o-Dichlorobenzene	.6	1000	600 ppb 600

DRAFT	DRAFT	DRAFT	DRAFT	DRAFT
64.	p-Dichlorobenzene	.075	1000	75 ppb
65.	1,2-Dichloroethane	.005	1000	5 ppb
66.	1,1-Dichloroethylene	.007	1000	7 ppb
67.	cis-1,2-Dichloroethylene	.07	1000	70 ppb
68.	trans-1,2-Dichloroethylene	.1	1000	100 ppb
69.	Dichloromethane	.005	1000	5 ppb
70.	1,2-Dichloropropane	.005	1000	5 ppb
71.	Ethylbenzene	.7	1000	700 ppb
72.	Styrene	.1	1000	100 ppb
73.	Tetrachloroethylene	.005	1000	5 ppb
74.	1,2,4-Trichlorobenzene	.07	1000	70 ppb
75.	1,1,1-Trichloroethane	.2	1000	200 ppb
76.	1,1,2-Trichloroethane	.005	1000	5 ppb
77.	Trichloroethylene	.005	1000	5 ppb
78.	TTHMs [Total trihalomethanes]	.10	1000	100 ppb
79.	Toluene	1	-	1 ppm
80.	Vinyl Chloride	.002	1000	2 ppb
81.	Xylenes	10	-	10 ppm



## Appendix B--Regulated Contaminants

Key**AL**=Action Level**MCL**=Maximum Contaminant Level**MCLG**=Maximum Contaminant Level Goal**MFL**=million fibers per liter **mrem/year**=millirems per year  
(a measure of radiation absorbed by the body)**NTU**=Nephelometric Turbidity Units**pCi/l**=picocuries per liter (a measure of radioactivity)**ppm**=parts per million, or milligrams per liter (mg/l)**ppb**=parts per billion, or micrograms per liter ( $\mu\text{g/l}$ )**ppt**=parts per trillion, or nanograms per liter**ppq**=parts per quadrillion, or picograms per liter**TT**=Treatment Technique

	Contaminant (units)	MCLG	MCL	Major Sources in Drinking Water
<b>Microbiological Contaminants</b>				
82.	Total Cloakroom Bacteria	0	presence of coliform bacteria in $\geq 5\%$ of monthly samples,	Naturally present in the environment
83.	Fecal coliform and <i>E. coli</i>	0	a routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive	Human and animal fecal waste
84.	Turbidity	n/a	TT	Soil runoff
<b>Radioactive Contaminants</b>				
85.	Beta/photon emitters (mrem/yr)	0	4	Decay of natural and man-made deposits
86.	Alpha emitters (pCi/l)	0	15	Erosion of natural deposits
87.	Combined radium (pCi/l)	0	5	Erosion of natural deposits
<b>Inorganic Contaminants</b>				
88.	Antimony (ppb)	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
89.	Arsenic (ppb)	n/a	50	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
90.	Asbestos (MFL)	7	7	Decay of asbestos cement water mains; Erosion of natural deposits
91.	Barium (ppm)	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
92.	Beryllium (ppb)	4	4	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries
93.	Cadmium (ppb)	5	5	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints
94.	Chromium (ppb)	100	100	Discharge from steel and pulp mills; Erosion of natural deposits
95.	Copper (ppm)	1.3	AL=1.3	Corrosion of household plumbing systems;

				Erosion of natural deposits; Leaching from wood preservatives
96.	Cyanide (ppb)	200	200	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
97.	Fluoride (ppm)	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
98.	Lead (ppb)	0	AL=15	Corrosion of household plumbing systems; Erosion of natural deposits
99.	Mercury [inorganic] (ppb)	2	2	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland
100.	Nitrate [as Nitrogen] (ppm)	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
101.	Nitrite [as Nitrogen] (ppm)	1	1	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
102.	Selenium (ppb)	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
103.	Thallium (ppb)	0.5	2	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories
<b>Synthetic Organic Contaminants including Pesticides and Herbicides</b>				
104.	2,4-D (ppb)	70	70	Runoff from herbicide used on row crops
105.	2,4,5-TP [Silvex](ppb)	50	50	Residue of banned herbicide
106.	Acrylamide	0	TT	Added to water during sewage/wastewater treatment
107.	Alachlor (ppb)	0	2	Runoff from herbicide used on row crops
108.	Atrazine (ppb)	3	3	Runoff from herbicide used on row crops
109.	Benzo(a)pyrene [PAH] (nanograms/l)	0	200	Leaching from linings of water storage tanks and distribution lines
110.	Carbofuran (ppb)	40	40	Leaching of soil fumigant used on rice and alfalfa
111.	Chlordane (ppb)	0	2	Residue of banned termiticide
112.	Dalapon (ppb)	200	200	Runoff from herbicide used on rights of way
113.	Di(2-ethylhexyl) adipate (ppb)	400	400	Discharge from chemical factories
114.	Di(2-ethylhexyl) phthalate (ppb)	0	6	Discharge from rubber and chemical factories
115.	Dibromochloropropane (ppt)	0	200	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
116.	Dinoseb (ppb)	7	7	Runoff from herbicide used on soybeans and vegetables
117.	Diquat (ppb)	20	20	Runoff from herbicide use

118.	Dioxin [2,3,7,8-TCDD] (ppq)	0	30	Emissions from waste incineration and other combustion; Discharge from chemical factories
119.	Endothall (ppb)	100	100	Runoff from herbicide use
120.	Endrin (ppb)	2	2	Residue of banned insecticide
121.	Epichlorohydrin	0	TT	Discharge from industrial chemical factories; An impurity of some water treatment chemicals
122.	Ethylene dibromide (ppt)	0	50	Discharge from petroleum refineries
123.	Glyphosate (ppb)	700	700	Runoff from herbicide use
124.	Heptachlor (ppt)	0	400	Residue of banned termiticide
125.	Heptachlor epoxide (ppt)	0	200	Breakdown of heptachlor
126.	Hexachlorobenzene (ppb)	0	1	Discharge from metal refineries and agricultural chemical factories
127.	Hexachlorocyclopentadiene (ppb)	50	50	Discharge from chemical factories
128.	Lindane (ppt)	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens
129.	Methoxychlor (ppb)	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
130.	Oxamyl [Vydate](ppb)	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
131.	PCBs [Polychlorinated biphenyls] (ppt)	0	500	Runoff from landfills; Discharge of waste chemicals
132.	Pentachlorophenol (ppb)	0	1	Discharge from wood preserving factories
133.	Picloram (ppb)	500	500	Herbicide runoff
134.	Simazine (ppb)	4	4	Herbicide runoff
135.	Toxaphene (ppb)	0	3	Runoff/leaching from insecticide used on cotton and cattle
<b>Volatile Organic Contaminants</b>				
136.	Benzene (ppb)	0	5	Discharge from factories; Leaching from gas storage tanks and landfills
137.	Carbon tetrachloride (ppb)	0	5	Discharge from chemical plants and other industrial activities
138.	Chlorobenzene (ppb)	100	100	Discharge from chemical and agricultural chemical factories
139.	o-Dichlorobenzene (ppb)	600	600	Discharge from industrial chemical factories
140.	p-Dichlorobenzene (ppb)	75	75	Discharge from industrial chemical factories
141.	1,2-Dichloroethane (ppb)	0	5	Discharge from industrial chemical factories
142.	1,1-Dichloroethylene (ppb)	7	7	Discharge from industrial chemical factories
143.	cis-1,2-Dichloroethylene (ppb)	70	70	Discharge from industrial chemical factories

144.	trans-1,2-Dichloroethylene (ppb)	100	100	Discharge from industrial chemical factories
145.	Dichloromethane (ppb)	0	5	Discharge from pharmaceutical and chemical factories
146.	1,2-Dichloropropane (ppb)	0	5	Discharge from industrial chemical factories
147.	Ethylbenzene (ppb)	700	700	Discharge from petroleum refineries
148.	Styrene (ppb)	100	100	Discharge from rubber and plastic factories; Leaching from landfills
149.	Tetrachloroethylene (ppb)	0	5	Leaching from PVC pipes; Discharge from factories and dry cleaners
150.	1,2,4-Trichlorobenzene (ppb)	70	70	Discharge from textile-finishing factories
151.	1,1,1-Trichloroethane (ppb)	200	200	Discharge from metal degreasing sites and other factories
152.	1,1,2-Trichloroethane (ppb)	3	5	Discharge from industrial chemical factories
153.	Trichloroethylene (ppb)	0	5	Discharge from metal degreasing sites and other factories
154.	TTHMs [Total trihalomethanes](ppb)	0	100	By-product of drinking water chlorination
155.	Toluene (ppm)	1	1	Discharge from petroleum factories
156.	Vinyl Chloride (ppb)	0	2	Leaching from PVC piping; Discharge from plastics factories
157.	Xylenes (ppm)	10	10	Discharge from petroleum factories; Discharge from chemical factories

## Appendix C--Health Effects Language

### *Microbiological Contaminants:*

- (1) Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
- (2) Fecal coliform/E.Coli. Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.
- (3) Turbidity. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

### *Radioactive Contaminants:*

- (4) Beta/photon emitters. Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
- (5) Alpha emitters. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
- (6) Combined Radium 226/228. Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

### *Inorganic Contaminants:*

- (7) Antimony. Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
- (8) Arsenic. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
- (9) Asbestos. Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
- (10) Barium. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
- (11) Beryllium. Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
- (12) Cadmium. Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
- (13) Chromium. Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
- (14) Copper. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
- (15) Cyanide. Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
- (16) Fluoride. Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.
- (17) Lead. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
- (18) Mercury (inorganic). Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
- (19) Nitrate. Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.
- (20) Nitrite. Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.
- (21) Selenium. Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
- (22) Thallium. Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.

### *Synthetic organic contaminants including pesticides and herbicides:*

- (23) 2,4-D. Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.

- (24) 2,4,5-TP (Silvex). Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
- (25) Acrylamide. Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
- (26) Alachlor. Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
- (27) Atrazine. Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
- (28) Benzo(a)pyrene [PAH]. Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
- (29) Carbofuran. Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
- (30) Chlordane. Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
- (31) Dalapon. Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
- (32) Di (2-ethylhexyl) adipate. Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience general toxic effects or reproductive difficulties.
- (33) Di (2-ethylhexyl) phthalate. Some people who drink water containing di (2-ethylhexyl) phthalate in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
- (34) Dibromochloropropane (DBCP). Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
- (35) Dinoseb. Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
- (36) Dioxin (2,3,7,8-TCDD). Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
- (37) Diquat. Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
- (38) Endothall. Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
- (39) Endrin. Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
- (40) Epichlorohydrin. Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.
- (41) Ethylene dibromide. Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
- (42) Glyphosate. Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
- (43) Heptachlor. Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
- (44) Heptachlor epoxide. Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
- (45) Hexachlorobenzene. Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
- (46) Hexachlorocyclopentadiene. Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
- (47) Lindane. Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
- (48) Methoxychlor. Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
- (49) Oxamyl [Vydate]. Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
- (50) PCBs [Polychlorinated biphenyls]. Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
- (51) Pentachlorophenol. Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
- (52) Picloram. Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
- (53) Simazine. Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.

(54) Toxaphene. Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.

*Volatile Organic Contaminants:*

(55) Benzene. Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.

(56) Carbon Tetrachloride. Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.

(57) Chlorobenzene. Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.

(58) o-Dichlorobenzene. Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.

(59) p-Dichlorobenzene. Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.

(60) 1,2-Dichloroethane. Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.

(61) 1,1-Dichloroethylene. Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.

(62) cis-1,2-Dichloroethylene. Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.

(63) trans-1,2-Dichloroethylene. Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.

(64) Dichloromethane. Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.

(65) 1,2-Dichloropropane. Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.

(66) Ethylbenzene. Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.

(67) Styrene. Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.

(68) Tetrachloroethylene. Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.

(69) 1,2,4-Trichlorobenzene. Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.

(70) 1,1,1-Trichloroethane. Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.

(71) 1,1,2-Trichloroethane. Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.

(72) Trichloroethylene. Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.

(73) TTHMs [Total Trihalomethanes]. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

(74) Toluene. Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.

(75) Vinyl Chloride. Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.

(76) Xylenes. Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.